

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DIVISION MEMORANDUM

GENERAL SUBJECT: VALUE ENGINEERING

NUMBER: CD-98-12

SUPERCEDES: CD-89-18

SPECIFIC SUBJECT: CONTRACTOR'S VALUE
ENGINEERING PROPOSALS

DATE: November 24, 1998

Original w/Signature on file in Construction Division

C. F. GEE

CONSTRUCTION ENGINEER

DIRECTED TO - DISTRICT ADMINISTRATORS

The Department encourages the contracting industry to employ innovation, technology, and initiative to reduce the cost of construction without sacrificing design capacity, reliability, service life, safety, or quality through the process of value engineering. Section 104.02 of the Specifications provides for the savings achieved through this process to be jointly shared by the Contractor and the Department. Any contract modification that conforms to the Specification criteria for value engineering will be considered under this program. This process has resulted in millions of dollars in savings to the Commonwealth.

In an effort to streamline the approval process and encourage more participation by the contracting industry, the Value Engineering Proposal (V.E.P.) process has been expanded to provide districts with the opportunity and authority to review and approve Contractor proposals at the district level. Districts opting to accept this decentralization should develop a Value Engineering Proposal Team. The districts that do not intend to create a District Value Engineering Proposal Team should still submit Contractor proposals to the Central Office for review and approval.

District Value Engineering Proposal teams will be under the direction of the District Construction Engineers. The District Construction Engineer is authorized to approve Value Engineering Proposals up to a maximum of \$200,000 (\$100,000 of anticipated savings to the Contractor) on any type of highway system in line with the current policy involving work orders and force account approval for District Administrators. As with the authority to approve work orders and force accounts, the responsibility rests with the District to ensure that the Contractor's proposal truly constitutes value engineering, and that the Contractor has submitted **all** of the necessary documentation to properly evaluate the proposal. The District Construction Engineer and the members of the District Value Engineering Proposal Team will want to be thoroughly familiar with the qualifying and acceptance criteria for Value Engineering Proposals enumerated in Section 104.02 of the Road and Bridge Specifications. To this end, the District Construction Engineer will

contact the Central Office V.E.P. Coordinator by phone to discuss the value engineering merits of the **concept** submitted by the Contractor prior to proceeding with accepting or rejecting the Contractor's proposal.

In the event the Contractor's V.E.P. requires an engineering analysis, it is the **Contractor's** responsibility to perform the analysis and submit the complete documentation, including calculations to substantiate the proposal. If the Contractor's analysis is incomplete or incorrect, the district will notify the Contractor to submit the completed or corrected information. Under no circumstance will the District or Residency complete or correct the Contractor's proposal. If the V.E.P. is unacceptable, it should be returned to the Contractor with an explanation as to why it did not meet the criteria for value engineering.

In some instances, portions of a V.E.P. may be unacceptable. For example, some items may not qualify and should be excluded from those items considered for payment, even though the V.E.P. as a whole is acceptable. V.E.P. teams should carefully scrutinize each item of work deleted or added in the Contractor's submittal and verify the need for such actions and the quantities under evaluation. Where quantities cannot be completely verified at the onset of implementing a V.E.P., such as in the case of some maintenance of traffic items, the Residency and particularly field personnel will want to carefully monitor the work to verify quantities in actual use. Proposals that promise negligible savings or which promise reduction in construction time should not be summarily dismissed as not being cost effective but should be carefully scrutinized. Where a reduction in construction time seems verifiable, the finish date of the contract should be adjusted to reflect such timesaving.

V.E.P. teams should also be aware of processes that may be permissible by Specifications and do not need to be considered as V.E.P.s. In such cases the Contractor can prosecute the work as planned within the scope of his contract without sharing any savings which may be realized.

Those involved in handling V.E.P.s as outlined in the accompanying flow charts should endeavor to meet the response times shown. The Resident Engineer will acknowledge and forward the V.E.P. to the District Construction Engineer within three working days of receipt from the Contractor. Within two working days of its receipt the District Construction Engineer will discuss the V.E.P. with the Central Office V.E.P. Coordinator or an Assistant Construction Engineer and conceptually accept, reject or forward the V.E.P. on to the District Value Engineering Proposal Team with any pertinent information and documentation. The District Construction Engineer will also forward a copy of the V.E.P. to the Central Office V.E.P. Coordinator. The District Value Engineering Proposal team will evaluate the Contractor's submittal and complete its findings and forward its recommendation back to the District Construction Engineer within ten working days of receipt. The District Construction Engineer will make the final determination for approval or rejection and advise the Resident Engineer within two working days of receiving the recommendation from the District V.E.P. Team. If approved, the Residency will promptly advise the Contractor and develop a strategy for processing the work order as the work progresses and quantities can be verified. In such cases the approved V.E.P. can be processed as one work order with pay out over several monthly progress estimates or the district can option to wait until the work under the V.E.P. is finalized and summarize the work under one work order.

It is recognized, however, that some proposals are complex or extensive and will require additional time and expertise for proper evaluation. In those cases the V.E.P. team should keep the Residency and the Contractor advised of the status of the evaluation and the reason for the delay. Where time is of primary importance in the implementation of a V.E.P., the District Construction

Engineer or District V.E.P. Team may give the Contractor ***conceptual approval*** to proceed. Conceptual approval acknowledges the Contractor's proposal as value engineering without affirming the specific amount of any savings.

Value Engineering Proposals over \$200,000 or submitted in districts that elect not to form their own District V.E.P. Teams should be promptly forwarded to the Central Office Value Engineering Proposal Coordinator for review and approval. The Central Office Value Engineering Proposal Coordinator will still serve to maintain the status of the Department's concerted efforts, which are federally audited, collect information on all V.E.P.s submitted to maintain the Department's historical data, advise on technical aspects of the program and processes, identify areas of expertise and prevent duplication in the area of accepted proposals. For these reasons, it is important that the Central Office Construction Division's Value Engineering Coordinator be copied on **all** Value Engineering Proposal correspondence.

Traditionally, V.E.P. teams have been composed of representatives from the Construction, Location and Design, Maintenance, Materials and Structures and Bridge divisions as this mixture of disciplines seems to best house the expertise to review most of the types of proposals that are submitted. Where additional expertise is required, the team can include any discipline necessary on a temporary basis. It is imperative that those selected for these committees have value engineering training so as to apply this philosophy in their review. It is also strongly suggested that those assigned to these teams serve for more than one year to maintain the continuity of the team concept and approach.

WSKJr.\